Volume Contents

NUMBER 1

O. J. Aldraihem and **A. A. Khdeir** 1 Exact deflection solutions of beams with shear piezoelectric actuators

A. A. Pisano and **P. Fuschi** 13 Closed form solution for a nonlocal elastic bar in tension

W. M. Sebastian 25 Nonlinear proportionality of shear-bond stress to shear force in partially plastic regions of asymmetric FRC-laminated steel members

V. A. Buryachenko, N. J. Pagano, R. Y. Kim and **J. E. Spowart** 47 Quantitative description and numerical simulation of random microstructures of composites and their effective elastic moduli

E. Jacquelin and **P. Hamelin** 73 Force recovered from three recorded strains

X. Zhao 89 The stress intensity factor history for an advancing crack in a transversely isotropic solid under 3-D loading

H. J. Ding, H. M. Wang and **P. F. Hou** 105 The transient responses of piezoelectric hollow cylinders for axisymmetric plane strain problems

D. H. Timm, B. B. Guzina and **V. R. Voller** 125 Prediction of thermal crack spacing

J. F. Peters and **E. Heymsfield** 143 Application of the 2-D constant strain assumption to FEM elements consisting of an arbitrary number of nodes

X. Zhao, K. M. Liew and **T. Y. Ng** 161 Vibration analysis of laminated composite cylindrical panels via a meshfree approach

D. D. Milašinović 181 Rheological–dynamical analogy: modeling of fatigue behavior

P. H. Wen, M. H. Aliabadi and **A. Young** 219 Fracture mechanics analysis of curved stiffened panels using BEM

V. I. Gulyayev, P. Z. Lugovyy and **G. M. Ivanchenko** 237 Discontinuous wave fronts propagation in anisotropic layered media

Erratum

T. Meurer, J. Qu and **L. J. Jacobs** 249 Erratum to "Wave propagation in nonlinear and hysteretic media—a numerical study" [International Journal of Solids and Structures 39 (2002) 5585–5614]

I Plasticity 2003

IV Keywords

NUMBER 2

C.-S. Liu 251 Symmetry groups and the pseudo-Riemann space-times for mixed-hardening elastoplasticity

G. M. Loughran, T. W. Shield and **P. H. Leo** 271 Fracture of shape memory CuAlNi single crystals

A. Gentile and **A. Messina** 295 On the continuous wavelet transforms applied to discrete vibrational data for detecting open cracks in damaged beams

M. Lembo 317 On the stability of elastic annular rods

F. G. Yuan, S. Yang and **B. Yang** 331 Three-dimensional Green's functions for composite laminates

Q. M. Li and **H. Meng** 343 About the dynamic strength enhancement of concrete-like materials in a split Hopkinson pressure bar test

N. Fakri, L. Azrar and **L. El Bakkali** 361 Electroelastic behavior modeling of piezoelectric composite materials containing spatially oriented reinforcements

S. Papargyri-Beskou, K. G. Tsepoura, D. Polyzos and **D. E. Beskos** 385 Bending and stability analysis of gradient elastic beams

J. Schröder and **P. Neff** 401 Invariant formulation of hyperelastic transverse isotropy based on polyconvex free energy functions

X.-Q. Feng, J.-Y. Li and **S.-W. Yu** 447 A simple method for calculating interaction of numerous microcracks and its applications

J. F. Wang, C. C. Lin and **B. L. Chen** 465 Vibration suppression for high-speed railway bridges using tuned mass dampers

H. W. Zhang and **W. X. Zhong** 493 Hamiltonian principle based stress singularity analysis near crack corners of multi-material junctions

NUMBER 3

N. P. Kruyt 511 Statics and kinematics of discrete Cosserat-type granular materials

G. Potzta and **L. P. Kollár** 535 Analysis of building structures by replacement sandwich beams

T. E. Tay, V. B. C. Tan and **M. Deng** 555 Element-failure concepts for dynamic fracture and delamination in low-velocity impact of composites

J. H. Yang and **K. Y. Lee** 573 Penny shaped crack in a piezoelectric cylinder surrounded by an elastic medium subjected to combined in-plane mechanical and electrical loads

H. Chai 591 Fracture mechanics analysis of thin coatings under plane-strain indentation

W. H. Warner 611 The maximum potential energy of elastic rods under axial gravitational load

S. Heo, J. H. Kim and **Y. Y. Kim** 633 Significance of distortion in thin-walled closed beam section design

X. Zhang, Q.-H. Qin and **Y.-W. Mai** 649 Asymptotic fields for dynamic crack growth in non-associative pressure sensitive materials

J. A. Teixeira de Freitas and **C. Cismaşiu** 671 Hybrid-Trefftz displacement element for spectral analysis of bounded and unbounded media

Y. Haitian and **L. Yan** 701 A combined approach of EFGM and precise algorithm in time domain solving viscoelasticity problems

M. Kekana, P. Tabakov and **M. Walker** 715 A shape control model for piezo-elastic structures based on divergence free electric displacement

P. Decuzzi and **G. P. Demelio** 729 Stress-driven morphological instability and catastrophic failure of microdevices

Z.-G. Zhou, B. Wang and **Y.-G. Sun** 747 Investigation of the dynamic behavior of two parallel symmetric cracks in piezoelectric materials use of non-local theory

III Keywords list

VI FraMCoS-5

NUMBER 4

H. Fan and **G. F. Wang** 763 Interaction between a screw dislocation and viscoelastic interfaces

J. A. Crossley, A. J. M. Spencer and **A. H. England** 777 Analytical solutions for bending and flexure of helically reinforced cylinders

M. Ciavarella and **G. Macina** 807 A note on the crack analogue model for fretting fatigue

D. Helm and **P. Haupt** 827 Shape memory behaviour: modelling within continuum thermomechanics

S. Maghous and **G. J. Creus** 851 Periodic homogenization in thermoviscoelasticity: case of multilayered media with ageing

T. W. Wright 871 On the speed of an unconstrained shear band in a perfectly plastic material

X. Wang and **Z. Zhong** 881 A circular inclusion with a nonuniform interphase layer in anti-plane shear

G. Lykotrafitis and **H. G. Georgiadis** 899 The three-dimensional steady-state thermo-elastodynamic problem of moving sources over a half space

L. B. Zuev, B. S. Semukhin and **N. V. Zarikovskaya** 941 Deformation localization and ultrasonic wave propagation rate in tensile Al as a function of grain size

S. Reese 951 Meso-macro modelling of fibre-reinforced rubber-like composites exhibiting large elastoplastic deformation

X.-L. Gao, K. Li and **S. Mall** 981 A mechanics-of-materials model for predicting Young's modulus of damaged woven fabric composites involving three damage modes

A. R. Hadjesfandiari and **G. F. Dargush** 1001 Boundary eigensolutions in elasticity II. Application to computational mechanics

Correspondence

E. Radi, D. Bigoni and **D. Capuani** 1033 Response to: Comments on "E. Radi, D. Bigoni and D. Capuani, Effects of pre-stress on crack-tip fields in elastic, incompressible solids" [International Journal of Solids and Structures 39 (2002) 3971–3996]

J. P. Bardet and **I. Vardoulakis** 1035 Reply to discussion by Dr. Katalin Bagi

NUMBER 5

R. M. Haj-Ali and **A. H. Muliana** 1037 A micromechanical constitutive framework for the nonlinear viscoelastic behavior of pultruded composite materials

J. Hohe and **L. Librescu** 1059 A nonlinear theory for doubly curved anisotropic sandwich shells with transversely compressible core

E. C. Preissner and **J. R. Vinson** 1089 Application of theorem of minimum potential energy to a complex structure Part I: two-dimensional analysis

E. C. Preissner and **J. R. Vinson** 1109 Application of theorem of minimum potential energy to a complex structure Part II: three-dimensional analysis

C. S. Yerramalli and **A. M. Waas** 1139 A failure criterion for fiber reinforced polymer composites under combined compression–torsion loading

G. E. Exadaktylos, P. A. Liolios and **M. C. Stavropoulou** 1165 A semi-analytical elastic stress–displacement solution for notched circular openings in rocks

J. H. Chang and **D. J. Wu** 1189 Finite element calculation of elastodynamic stress field around a notch tip via contour integrals

S.-Y. Oh, O. Song and **L. Librescu** 1203 Effects of pretwist and presetting on coupled bending vibrations of rotating thin-walled composite beams

N. Takano, M. Zako, F. Kubo and **K. Kimura** 1225 Microstructure-based stress analysis and evaluation for porous ceramics by homogenization method with digital image-based modeling

D. Inglis and **S. Pietruszczak** 1243 Characterization of anisotropy in porous media by means of linear intercept measurements

L. Wang and **Y. L. Xu** 1265 Wind–rain-induced vibration of cable: an analytical model (1)

P. Trovalusci and **R. Masiani** 1281 Non-linear micropolar and classical continua for anisotropic discontinuous materials

A. S. Koltsov, V. A. Sursjakov and **V. V. Moshev** 1299 Interfacial friction in the debonded structural cell of particulate rubber composites

M. Jamal, L. Lahlou, M. Midani, H. Zahrouni, A. Limam, N. Damil and **M. Potier-Ferry** 1311 A semi-analytical buckling analysis of imperfect cylindrical shells under axial compression

K. Bagi 1329 Discussion on "The asymmetry of stress in granular media" by J.P. Bardet and I. Vardoulakis [Int. J. Solids and Structures, Vol. 38, pp. 353–367 (2001)]

Letter to the Editor

A. N. Guz 1333 Comments on "Effects of pre-stress on crack-tip fields in elastic, incompressible solids" by E. Radi, D. Bigoni, D. Capuani

Erratum

S. G. Mogilevskaya and **S. L. Crouch** 1335 Erratum to "A Galerkin boundary integral method for multiple circular elastic inclusions with homogeneously imperfect interfaces" [International Journal of Solids and Structures 39(2002) 4723–4746]

III Keywords

NUMBER 6

A. D. Drozdov and **J. deC. Christiansen** 1337 The effect of annealing on the viscoplastic response of semicrystalline polymers at finite strains

M. Lambrecht, C. Miehe and **J. Dettmar** 1369 Energy relaxation of non-convex incremental stress potentials in a strain-softening elastic–plastic bar

L. Shen and **J. Li** 1393 Effective elastic moduli of composites reinforced by particle or fiber with an inhomogeneous interphase

S. T. Choi, H. Shin and **Y. Y. Earmme** 1411 On the unified approach to anisotropic and isotropic elasticity for singularity, interface and crack in dissimilar media

Z. Huang and **Z.-B. Kuang** 1433 A mixed electric boundary value problem for a two-dimensional piezoelectric crack

H. Xiao and **L.-S. Chen** 1455 Hencky's logarithmic strain and dual stress–strain and strain–stress relations in isotropic finite hyperelasticity

L. Anand and **M. E. Gurtin** 1465 A theory of amorphous solids undergoing large deformations, with application to polymeric glasses

K. Matouš 1489 Damage evolution in particulate composite materials

B. B. Guzina, S. N. Fata and **M. Bonnet** 1505 On the stress-wave imaging of cavities in a semi-infinite solid

M. Karama, K. S. Afaq and **S. Mistou** 1525 Mechanical behaviour of laminated composite beam by the new multi-layered laminated composite structures model with transverse shear stress continuity

C.-B. Lin 1547 On a bounded elliptic elastic inclusion in plane magnetoelasticity

H. Stumpf and **K. Hackl** 1567 Micromechanical concept for the analysis of damage evolution in thermo-viscoelastic and quasi-brittle materials

V. M. Vassilev and **P. A. Djondjorov** 1585 Application of Lie transformation group methods to classical linear theories of rods and plates

NUMBER 7

M. Huang 1615 Stress effects on the performance of optical waveguides

D. Sun and **L. Tong** 1633 Effect of debonding in active constrained layer damping patches on hybrid control of smart beams

Q. D. Yang, K. L. Rugg, B. N. Cox and **M. C. Shaw** 1653 Failure in the junction region of T-stiffeners: 3D-braided vs. 2D tape laminate stiffeners

J. Wang, L. Chen and **S. Fang** 1669 State vector approach to analysis of multilayered magneto-electro-elastic plates

I. Doghri and **A. Ouaar** 1681 Homogenization of two-phase elasto-plastic composite materials and structures. Study of tangent operators, cyclic plasticity and numerical algorithms

A. Cazzani and **M. Rovati** 1713 Extrema of Young's modulus for cubic and transversely isotropic solids

K. M. Liew, J. Z. Zhang, T. Y. Ng and **S. A. Meguid** 1745 Three-dimensional modelling of elastic bonding in composite laminates using layerwise differential quadrature

T. Lewiński and **J. Sokołowski** 1765 Energy change due to the appearance of cavities in elastic solids

Discussion

M. R. Kuhn 1805 Discussion of "The asymmetry of stress in granular media" [J.P. Bardet and I. Vardoulakis, Int. J. Solids Struct. 2001, Vol. 38, No. 2, pp. 353–367]

J. P. Bardet and **I. Vardoulakis** 1809 Reply to Dr. Kuhn's discussion

III Keywords

NUMBER 8

K.-C. Wu 1811 Transient motion of an interfacial line force or dislocation in an anisotropic elastic bimaterial

W.-L. Yin 1825 Structure and properties of the solution space of general anisotropic laminates

P. Redanz and **V. Tvergaard** 1853 Analysis of shear band instabilities in compaction of powders

P. Qiao, J. Wang and **J. F. Davalos** 1865 Analysis of tapered ENF specimen and characterization of bonded interface fracture under Mode-II loading

M. A. El-Hadek and **H. V. Tippur** 1885 Dynamic fracture parameters and constraint effects in functionally graded syntactic epoxy foams

Z. Xia, Y. Zhang and **F. Ellyin** 1907 A unified periodical boundary conditions for representative volume elements of composites and applications

N.-A. Noda, N. Ogasawara and **T. Matsuo** 1923 Asymmetric problem of a row of revolutional ellipsoidal cavities using singular integral equations

W.-y. Tian and **K. T. Chau** 1943 Arbitrarily oriented crack near interface in piezoelectric bimaterials

P. Huang, J. Sun and **Z. Li** 1959 Evolution of penny-shaped microcracks by interface migration

D. S. Liu and **D. Y. Chiou** 1973 A coupled IEM/FEM approach for solving elastic problems with multiple cracks

S. Mercier and **A. Molinari** 1995 Predictions of bifurcation and instabilities during dynamic extension

B. Yang, E. Pan and **F. G. Yuan** 2017 Three-dimensional stress analyses in composite laminates with an elastically pinned hole

Announcement

2037 Call for proposals to host an IUTAM Symposium or Instructional Summer School in 2006 or 2007

Corrigendum

K. B. Broberg 2039 Corrigendum to "Constant velocity crack propagation—dependence on remote load" [International Journal of Solids and Structures 39 (2002) 6403–6410]

NUMBER 9

B. J. Chen, Z. M. Xiao and **K. M. Liew** 2041 A piezoelectric screw dislocation near a wedge-shaped bi-material interface

M. Romeo 2057 Interfacial viscoelastic SH waves

E. Altus and **S. Givli** 2069 Strength reliability of statically indeterminate heterogeneous beams

A.-J. Wang and **D. L. McDowell** 2085 Optimization of a metal honeycomb sandwich beam-bar subjected to torsion and bending

P. A. Martin 2101 On Green's function for a bimaterial elastic half-plane

C.-S. Liu 2121 Smoothing elastoplastic stress–strain curves obtained by a critical modification of conventional models

M. Vural and **G. Ravichandran** 2147 Dynamic response and energy dissipation characteristics of balsa wood: experiment and analysis

I. J. Beyerlein, C. H. Zhou and **L. S. Schadler** 2171 A time dependent micro-mechanical fiber composite model for inelastic zone growth in viscoelastic matrices

U. Lee, K. Cho and **J. Shin** 2195 Identification of orthotropic damages within a thin uniform plate

P. Hutapea, F. G. Yuan and **N. J. Pagano** 2215 Micro-stress prediction in composite laminates with high stress gradients

M. Cheng, W. Chen and **K. R. Sridhar** 2249 Biaxial flexural strength distribution of thin ceramic substrates with surface defects

K. V. Williams, R. Vaziri and **A. Poursartip** 2267 A physically based continuum damage mechanics model for thin laminated composite structures

E. Zieniuk 2301 Bézier curves in the modification of boundary integral equations (BIE) for potential boundary-values problems

III Keywords

NUMBER 10

A. D. Drozdov and **Q. Yuan** 2321 The viscoelastic and viscoplastic behavior of low-density polyethylene

J. Liang, R. Huang, J. H. Prévost and **Z. Suo** 2343 Evolving crack patterns in thin films with the extended finite element method

K. M. Liew, S. Kitipornchai, X. Z. Zhang and **C. W. Lim** 2355 Analysis of the thermal stress behaviour of functionally graded hollow circular cylinders

X. Wang, Z. Zhong and **F. L. Wu** 2381 A moving conducting crack at the interface of two dissimilar piezoelectric materials

M. Grédiac, E. Toussaint and **F. Pierron** 2401 Special virtual fields for the direct determination of material parameters with the virtual fields method. 3. Application to the bending rigidities of anisotropic plates

A. Chakraborty and **S. Gopalakrishnan** 2421 A spectrally formulated finite element for wave propagation analysis in functionally graded beams

D. Sun and **L. Tong** 2449 Closed-loop based detection of debonding of piezoelectric actuator patches in controlled beams

T. Y. Qin and **N. A. Noda** 2473 Stress intensity factors of a rectangular crack meeting a bimaterial interface

C. Li and **T.-W. Chou** 2487 A structural mechanics approach for the analysis of carbon nanotubes

H. G. Georgiadis and **E. G. Velgaki** 2501 High-frequency Rayleigh waves in materials with micro-structure and couple-stress effects

P. Papanastasiou, D. Durban and **B. Lenoach** 2521 Singular plastic fields in wedge indentation of pressure sensitive solids

A. J. Levy 2535 Bifurcation phenomena in the rigid inclusion power law matrix composite sphere

P. W. Chung and **R. R. Namburu** 2563 On a formulation for a multiscale atomistic-continuum homogenization method

C. P. Jiang, Z. H. Tong and **Y. K. Cheung** 2589 A generalized self-consistent method accounting for fiber section shape

NUMBER 11

R. K. Abu Al-Rub and **G. Z. Voyiadjis**	2611	On the coupling of anisotropic damage and plasticity models for ductile materials
X. "George" Zhao and **J. L. Rose**	2645	Boundary element modeling for defect characterization potential in a wave guide
D.-S. Lee	2659	Tension of a long circular cylinder having a spherical cavity with a peripheral edge crack
C. Polizzotto	2673	Variational methods for the steady state response of elastic–plastic solids subjected to cyclic loads
A. Dorfmann and **R. W. Ogden**	2699	A pseudo-elastic model for loading, partial unloading and reloading of particle-reinforced rubber
I. V. Rokach	2715	On the accurate determination of contact compliance for impact test modelling
S. H. Chen, T. C. Wang and **S. Kao-Walter**	2731	A crack perpendicular to the bimaterial interface in finite solid
G. Guo, W. Yang and **Y. Huang**	2757	Intersonic crack growth under time-dependent loading
S. Hartmann and **P. Neff**	2767	Polyconvexity of generalized polynomial-type hyperelastic strain energy functions for near-incompressibility
J. Aboudi	2793	Micromechanical analysis of the finite elastic–viscoplastic response of multiphase composites
M. M. Rashid and **V. Tvergaard**	2819	On the path of a crack near a graded interface under large scale yielding
H. Pengfei, Y. T. Leung Andrew and **D. Haojiang**	2833	The elliptical Hertzian contact of transversely isotropic magnetoelectroelastic bodies
M. Ritto-Corrêa and **D. Camotim**	2851	Work-conjugacy between rotation-dependent moments and finite rotations
Y.-H. Zhou, Y. Gao and **X. J. Zheng**	2875	Buckling and post-buckling analysis for magneto-elastic–plastic ferromagnetic beam-plates with unmovable simple supports
T. Ferracin, C. M. Landis, F. Delannay and **T. Pardoen**	2889	On the determination of the cohesive zone properties of an adhesive layer from the analysis of the wedge-peel test
	III	Keywords

NUMBER 12

E. Lorentz and **S. Andrieux**	2905	Analysis of non-local models through energetic formulations

H. H. Ruan, T. X. Yu and **Y. L. Hua**	2937	Plastic modal approximations in analyzing beam-on-beam collisions
P. Ireman, A. Klarbring and **N. Strömberg**	2957	A model of damage coupled to wear
H.-C. Tsai	2975	Flexure analysis of circular elastic layers bonded between rigid plates
T. Vodenitcharova and **L. C. Zhang**	2989	A mechanics prediction of the behaviour of mono-crystalline silicon under nano-indentation
H. Surendranath, H. A. Bruck and **S. Gowrisankaran**	2999	Enhancing the optimization of material distributions in composite structures using gradient architectures
S. E. Schoenfeld and **T. W. Wright**	3021	A failure criterion based on material instability
G. T. Lim and **J. N. Reddy**	3039	On canonical bending relationships for plates
A. Messina	3069	Free vibrations of multilayered doubly curved shells based on a mixed variational approach and global piecewise-smooth functions
D. Zhou, F. T. K. Au, Y. K. Cheung and **S. H. Lo**	3089	Three-dimensional vibration analysis of circular and annular plates via the Chebyshev–Ritz method
N.-I. Kim, K.-J. Seo and **M.-Y. Kim**	3107	Free vibration and spatial stability of non-symmetric thin-walled curved beams with variable curvatures
M. A. Osipenko, Yu. I. Nyashin and **R. N. Rudakov**	3129	A contact problem in the theory of leaf spring bending
F. C. Bardi, H. D. Yun and **S. Kyriakides**	3137	On the axisymmetric progressive crushing of circular tubes under axial compression
A. Wang and **W. Tian**	3157	Twin-characteristic-parameter solution of axisymmetric dynamic plastic buckling for cylindrical shells under axial compression waves
R. P. Gilbert, V. M. Harik and **A. Panchenko**	3177	Vibration of two bonded composites: effects of the interface and distinct periodic structures
	I	Announcement

NUMBERS 13–14

L. M. Brock	3195	Rapid sliding indentation with friction on a transversely isotropic thermoelastic half-space
T. Liu and **Q. Li**	3211	Transient elastic wave propagation in an infinite Timoshenko beam on viscoelastic foundation

F. Pellicano and **M. Amabili**	3229	Stability and vibration of empty and fluid-filled circular cylindrical shells under static and periodic axial loads
O. A. Bauchau	3253	A self-stabilized algorithm for enforcing constraints in multibody systems
Z. Q. Yue, H. T. Xiao and **L. G. Tham**	3273	Boundary element analysis of crack problems in functionally graded materials
V. Berdichevsky and **D. J. Foster**	3293	On Saint-Venant's principle in the dynamics of elastic beams
L. S. Ma and **T. J. Wang**	3311	Nonlinear bending and post-buckling of a functionally graded circular plate under mechanical and thermal loadings
Y. Wen and **C. Basaran**	3331	Analysis of multi-layered microelectronic packaging under uniformly distributed loading
T. Touhei	3347	Analysis of scattering waves in an elastic layered medium by means of the complete eigenfunction expansion form of the Green's function
F. M. Al-Abbasi and **J. A. Nemes**	3379	Micromechanical modeling of the effect of particle size difference in dual phase steels
A. R. Khoei, A. Bakhshiani and **M. Mofid**	3393	An implicit algorithm for hypoelasto-plastic and hypoelasto-viscoplastic endochronic theory in finite strain isotropic–kinematic-hardening model
M. Enderlein, A. Ricoeur and **M. Kuna**	3425	Comparison of finite element techniques for 2D and 3D crack analysis under impact loading
L. A. Godoy and **A. E. Mirasso**	3439	On the elastic stability of static non-holonomic systems
A. Suffis, T. A. A. Lubrecht and **A. Combescure**	3463	Damage model with delay effect Analytical and numerical studies of the evolution of the characteristic damage length
G. Johansson and **A. J. Niklasson**	3477	Approximate dynamic boundary conditions for a thin piezoelectric layer
A. Boström and **P. Bövik**	3493	Ultrasonic scattering by a side-drilled hole
C.-F. Gao and **H. Balke**	3507	Fracture analysis of circular-arc interface cracks in piezoelectric materials
P. Isaksson and **P. Ståhle**	3523	A directional crack path criterion for crack growth in ductile materials subjected to shear and compressive loading under plane strain conditions

N. P. Kruyt 3537 Contact forces in anisotropic frictional granular materials

E. Douka, S. Loutridis and **A. Trochidis** 3557 Crack identification in beams using wavelet analysis

X.-F. Li and **G. J. Tang** 3571 Transient response of a piezoelectric ceramic strip with an eccentric crack under electromechanical impacts

Y. Z. Chen 3589 Analysis of *L*-integral and theory of the derivative stress field in plane elasticity

A. M. Puzrin and **M. F. Randolph** 3603 New planar velocity fields for upper bound limit analysis

G. Borino, B. Failla and **F. Parrinello** 3621 A symmetric nonlocal damage theory

T. Kanit, S. Forest, I. Galliet, V. Mounoury and **D. Jeulin** 3647 Determination of the size of the representative volume element for random composites: statistical and numerical approach

C. Hwu 3681 Stroh-like formalism for the coupled stretching–bending analysis of composite laminates

H. Yang, J. Yan and **X. Li** 3707 Solving inverse viscoelasticity problems via aggregate function approach

R. Baker 3717 Sufficient conditions for existence of physically significant solutions in limiting equilibrium slope stability analysis

T. Usuki and **A. Maki** 3737 Behavior of beams under transverse impact according to higher-order beam theory

R. A. Chaudhuri 3787 Three-dimensional asymptotic stress field in the vicinity of the circumference of a penny shaped discontinuity

III Keywords

NUMBER 15

V. A. Lubarda 3807 The effects of couple stresses on dislocation strain energy

V. A. Lubarda 3827 Circular inclusions in anti-plane strain couple stress elasticity

D. V. Kubair and **P. H. Geubelle** 3853 Comparative analysis of extrinsic and intrinsic cohesive models of dynamic fracture

K. M. Liew, J. Yang and **S. Kitipornchai** 3869 Postbuckling of piezoelectric FGM plates subject to thermo-electro-mechanical loading

C. Y. Wang, C. Q. Ru and **A. Mioduchowski** 3893 Axially compressed buckling of pressured multiwall carbon nanotubes

M. C. Hsieh and **C. Hwu** 3913 Explicit solutions for the coupled stretching–bending problems of holes in composite laminates

L. Zhenhuan, H. Minsheng and **W. Cheng** 3935 Scale-dependent plasticity potential of porous materials and void growth

A. R. de Faria and **S. F. M. de Almeida** 3955 Buckling optimization of plates with variable thickness subjected to nonuniform uncertain loads

J.-H. Kim and **G. H. Paulino** 3967 The interaction integral for fracture of orthotropic functionally graded materials: evaluation of stress intensity factors

S. Pietruszczak and **R. Ushaksaraei** 4003 Description of inelastic behaviour of structural masonry

H. Ye, C. Basaran and **D. C. Hopkins** 4021 Damage mechanics of microelectronics solder joints under high current densities

C. CHAKER 4033 Stress trajectories in the presence of friction

K. Kaneko, K. Terada, T. Kyoya and **Y. Kishino** 4043 Global–local analysis of granular media in quasi-static equilibrium

R. Morbiducci 4071 Nonlinear parameter identification of models for masonry

Corrigendum

P. Qiao, J. Wang and **J. F. Davalos** 4091 Analysis of tapered ENF specimen and characterization of bonded interface fracture under Mode-II loading [International Journal of Solids and Structures, 40 (8), 1865–1884 (2003)]

NUMBER 16

Preface

A. K. Noor, S. E. Bechtel and **S. Ghosh** 4093 International Journal of Solids and Structures honoring the 70th birthday of Arthur W. Leissa

C. W. Bert and **K. K. Devarakonda** 4097 Buckling of rectangular plates subjected to nonlinearly distributed in-plane loading

F. Y. M. Wan 4107 Stress boundary conditions for plate bending

Short communication

S. Liu and **K. P. Soldatos** 4125 Further assessment of a generalized plate model: stress analysis of angle-ply laminates

A. V. Singh and **U. K. Paul** 4135 Finite displacement static analysis of thin plate with an opening—a variational approach

C. Adam 4153 Moderately large flexural vibrations of composite plates with thick layers

J. Song, J. Peters, A. Noor and **P. Michaleris** 4167 Sensitivity analysis of the thermomechanical response of welded joints

C. W. Smith 4181 An experimental method for evaluating SIF distributions during crack turning in non-brittle materials

K. P. Herrmann and **V. V. Loboda** 4191 Fracture mechanical assessment of interface cracks with contact zones in piezoelectric bimaterials under thermoelectromechanical loadings I. Electrically permeable interface cracks

K. P. Herrmann and **V. V. Loboda** 4219 Fracture mechanical assessment of interface cracks with contact zones in piezoelectric bimaterials under thermoelectromechanical loadings II. Electrically impermeable interface cracks

V. Birman and **L. W. Byrd** 4239 Damping in ceramic matrix composites with matrix cracks

C. W. Lim 4257 A spiral model for bending of non-linearly pretwisted helicoidal structures with lateral loading

I. Elishakoff and **M. Zingales** 4281 Contrasting probabilistic and anti-optimization approaches in an applied mechanics problem

III Keywords

NUMBER 17

M. B. Rubin and **I. Lomov** 4299 A thermodynamically consistent large deformation elastic–viscoplastic model with directional tensile failure

J.-Y. F. Kim 4319 Extinction of elastic wave energy due to scattering in a viscoelastic medium

A. Fernandes and **J. Pouget** 4331 Analytical and numerical approaches to piezoelectric bimorph

M. M. Attard 4353 Finite strain—isotropic hyperelasticity

I. F. Collins 4379 A systematic procedure for constructing critical state models in three dimensions

S. Kolling, R. Mueller and **D. Gross** 4399 The influence of elastic constants on the shape of an inclusion

A. Mugadu and **D. A. Hills** 4417 The evolution of the process zone when a complete contact is subject to cyclically varying loads

Y. Kanno and **M. Ohsaki** 4437 Minimum principle of complementary energy of cable networks by using second-order cone programming

X. Y. Wu, K. T. Ramesh and **T. W. Wright** 4461 The effects of thermal softening and heat conduction on the dynamic growth of voids

F. M. Detinko 4479 Lumped damping and stability of Beck column with a tip mass

G. Ben-Dor, A. Dubinsky and **T. Elperin** 4487 Shape optimization of impactor penetrating into concrete or limestone targets

J. B. Dafedar, Y. M. Desai and **A. A. Mufti** 4501 Stability of sandwich plates by mixed, higher-order analytical formulation

E. Bar-on, M. B. Rubin and **D. Z. Yankelevsky** 4519 Thermomechanical constitutive equations for the dynamic response of ceramics

V. V. Moshev and **S. E. Evlampieva** 4549 Filler-reinforcement of elastomers viewed as a tribo-elastic phenomenon

M. M. Attard 4563 Finite strain—beam theory

B. Nadler and **M. B. Rubin** 4585 A new 3-D finite element for nonlinear elasticity using the theory of a Cosserat point

NUMBER 18

R. K. L. Su and **H. Y. Sun** 4615 Numerical solutions of two-dimensional anisotropic crack problems

C. Sultan and **R. Skelton** 4637 Deployment of tensegrity structures

I. A. Brigadnov and **A. Dorfmann** 4659 Mathematical modeling of magneto-sensitive elastomers

T. H. Young and **C. Y. Gau** 4675 Dynamic stability of pre-twisted beams with non-constant spin rates under axial random forces

G. A. Altay and **M. C. Dökmeci** 4699 Some comments on the higher order theories of piezoelectric, piezothermoelastic and thermopiezoelectric rods and shells

J. Merodio and **R. W. Ogden** 4707 Instabilities and loss of ellipticity in fiber-reinforced compressible non-linearly elastic solids under plane deformation

V. Gattulli and **M. Lepidi** 4729 Nonlinear interactions in the planar dynamics of cable-stayed beam

M. Cheng and **W. Chen** 4749 Experimental investigation of the stress–stretch behavior of EPDM rubber with loading rate effects

J.-S. Lin and **J.-S. Chen** 4769 Dynamic snap-through of a laterally loaded arch under prescribed end motion

L. Tong and **Q. Luo** 4789 Exact dynamic solutions to piezoelectric smart beams including peel stresses I: Theory and application

Q. Luo and **L. Tong** 4813 Exact dynamic solutions to piezoelectric smart beams including peel stresses Part II: Numerical results, comparison and approximate solution

H. M. Shodja and **M. T. Kamali** 4837 Three-dimensional analysis of piezocomposite plates with arbitrary geometry and boundary conditions

S. K. Kanaun and **V. M. Levin** 4859 Effective medium method in the problem of axial elastic shear wave propagation through fiber composites

C. N. Duong 4879 On the estimation of K_t at a bottom of a grind-out cavity after one-sided patching

A. Danescu and **G. Grenet** 4895 Vertical correlations in superlattices using the Grinfeld method

D. C. Pham 4911 Asymptotic estimates on uncertainty of the elastic moduli of completely random trigonal polycrystals

S. W. Liu and **J. H. Huang** 4925 Transient dynamic responses of a cracked solid subjected to in-plane loadings

III Keywords

NUMBER 19

Editorial

G. Díaz 4941 Pan American Congress of Applied Mechanics (PACAM VII)

G. Barrientos and **L. Baeza** 4943 Simulation of impact between rigid elements

V. Bubnovich, M. Toledo, H. Gonzalez and **R. Salas** 4955 Finite differences study of ignition in a methane–air mixture flow

S. Berres and **R. Bürger**	4965	On gravity and centrifugal settling of polydisperse suspensions forming compressible sediments
J. Cedergren, N. J. Sørensen and **S. Melin**	4989	Numerical investigation of powder compaction of gear wheels
G. Díaz, P. Kittl and **M. Rosales**	5001	Probabilistic design and quality control in probabilistic strength of materials
P. B. Gonçalves, D. Pamplona, P. B. C. Teixeira, R. L. C. Jerusalmi, I. A. Cestari and **A. A. Leirner**	5017	Dynamic non-linear behavior and stability of a ventricular assist device
N. Hasebe, X. Wang and **M. Kondo**	5037	Green's functions for plane problem under various boundary conditions and applications
J. Jäger	5051	Properties of equal bodies in contact with friction
W. Kurnik and **P. M. Przybyłowicz**	5063	Active stabilisation of a piezoelectric fiber composite shaft subject to follower load
M. F. Letelier and **D. A. Siginer**	5081	Secondary flows of viscoelastic liquids in straight tubes
K.-M. Lim and **C. R. Steele**	5097	Response suppression and transient behavior in a nonlinear active cochlear model with feed-forward
M. E. Marante and **J. Flórez-López**	5109	Three-dimensional analysis of reinforced concrete frames based on lumped damage mechanics
L. R. Molisani, R. A. Burdisso and **D. Tsihlas**	5125	A coupled tire structure/acoustic cavity model
L. G. Machado, M. A. Savi and **P. M. C. L. Pacheco**	5139	Nonlinear dynamics and chaos in coupled shape memory oscillators
S. Lin, F. Narita and **Y. Shindo**	5157	Electroelastic analysis of a piezoelectric cylindrical fiber with a penny-shaped crack embedded in a matrix
A. Stefański and **T. Kapitaniak**	5175	Synchronization of two chaotic oscillators via a negative feedback mechanism
A. Tylikowski and **K. Frischmuth**	5187	Stability and stabilization of circular plate parametric vibrations

NUMBER 20

V. Mantič, F. París and **J. Berger**	5197	Singularities in 2D anisotropic potential problems in multi-material corners Real variable approach

G. G. Portnov, M. Y. Ochan and **C. E. Bakis**	5219	Critical state of imbalanced rotating anisotropic disks with small radial and shear moduli
G. Davì and **A. Milazzo**	5229	A meshfree method for transverse vibrations of anisotropic plates
Ch. Zhang, J. Sladek and **V. Sladek**	5251	Effects of material gradients on transient dynamic mode-III stress intensity factors in a FGM
D. Ieşan and **L. Nappa**	5271	Axially symmetric problems for a porous elastic solid
X. D. Wang and **L. Y. Jiang**	5287	The effective electroelastic property of piezoelectric media with parallel dielectric cracks
J. F. Wilson	5305	Lightning-induced fracture of masonry and rock
H. Lee, H. Seo and **G.-J. Park**	5319	Design enhancements for stress relaxation in automotive multi-shell-structures
Z. Zhong and **E. T. Shang**	5335	Three-dimensional exact analysis of a simply supported functionally gradient piezoelectric plate
Y. W. Liu and **Q. H. Fang**	5353	Electro-elastic interaction between a piezoelectric screw dislocation and circular interfacial rigid lines
E. G. Karpov, N. G. Stephen and **W. K. Liu**	5371	Initial tension in randomly disordered periodic lattices
M. H. F. Dado and **O. A. Shpli**	5389	Crack parameter estimation in structures using finite element modeling
X. Peng and **J. Fan**	5407	Analysis for polycrystal nonproportional cyclic plasticity with a dissipated energy based rule for cross-hardening
Z. Qiu and **X. Wang**	5423	Comparison of dynamic response of structures with uncertain-but-bounded parameters using non-probabilistic interval analysis method and probabilistic approach
C. A. Bronkhorst	5441	Modelling paper as a two-dimensional elastic–plastic stochastic network
M. Doyoyo	5455	Experiments on the penetration of thin long-rod projectiles into thick long-cylindrical borosilicate targets under pressure-free polycarbonate, aluminum and steel confinements
D. Wang, C. Zhou and **J. Rong**	5477	Free and forced vibration of repetitive structures
S. Towfighi and **T. Kundu**	5495	Elastic wave propagation in anisotropic spherical curved plates

H.-Y. Liu, Q.-H. Qin and **Y.-W. Mai** 5511 Theoretical model of piezoelectric fibre pull-out

III Keywords

NUMBER 21

S. Goutianos, C. Galiotis and **T. Peijs** 5521 Mechanisms of stress transfer and interface integrity in carbon/epoxy composites under compression loading. Part II: Numerical approach

S.-H. Lin, J. Pan, T. Tyan and **P. Prasad** 5539 A general failure criterion for spot welds under combined loading conditions

C. S. Chang, Q. Shi and **C. L. Liao** 5565 Elastic constants for granular materials modeled as first-order strain-gradient continua

M. Ciavarella, L. Johansson, L. Afferrante, A. Klarbring and **J. R. Barber** 5583 Interaction of thermal contact resistance and frictional heating in thermoelastic instability

P. Mäkelä and **S. Östlund** 5599 Orthotropic elastic–plastic material model for paper materials

M. H. Santare, P. Thamburaj and **G. A. Gazonas** 5621 The use of graded finite elements in the study of elastic wave propagation in continuously nonhomogeneous materials

N.-H. Lim, N.-H. Park, Y.-J. Kang and **I.-H. Sung** 5635 Elastic buckling of I-beams under linear moment gradient

S. M. Kwon 5649 Electrical nonlinear anti-plane shear crack in a functionally graded piezoelectric strip

J. D. Clayton and **D. L. McDowell** 5669 Finite polycrystalline elastoplasticity and damage: multiscale kinematics

W. Q. Chen and **K. Y. Lee** 5689 Alternative state space formulations for magneto-electric thermoelasticity with transverse isotropy and the application to bending analysis of nonhomogeneous plates

F. W. Zok, H. J. Rathbun, Z. Wei and **A. G. Evans** 5707 Design of metallic textile core sandwich panels

A. V. Vostroukhov and **A. V. Metrikine** 5723 Periodically supported beam on a visco-elastic layer as a model for dynamic analysis of a high-speed railway track

G. D. Manolis, T. V. Rangelov and **R. P. Shaw** 5753 The non-homogeneous biharmonic plate equation: fundamental solutions

V. Tvergaard 5769 Influence of plasticity on interface toughness in a layered solid with residual stresses

Q. H. Fang, Y. W. Liu and **C. P. Jiang** 5781 Edge dislocation interacting with an interfacial crack along a circular inhomogeneity

J. Alfaiate, A. Simone and **L. J. Sluys** 5799 Non-homogeneous displacement jumps in strong embedded discontinuities

X. Zhang, Y.-W. Mai and **R. G. Jeffrey** 5819 A cohesive plastic and damage zone model for dynamic crack growth in rate-dependent materials

I. H. Stampouloglou and **E. E. Theotokoglou** 5839 The plane elasticity problem of an isotropic wedge under normal and shear distributed loading—application in the case of a multi-material problem

Discussion

L. H. Teh 5861 "Work-conjugacy between rotation-dependent moments and finite rotations" by Manuel Ritto-Correa and Dinar Camotim [Vol. 40, No. 11, pp. 2851–2873]

NUMBER 22

C. S. Huang, K. Y. Nieh and **M. C. Yang** 5865 In-plane free vibration and stability of loaded and shear-deformable circular arches

K. Farahani and **R. Naghdabadi** 5887 Basis free relations for the conjugate stresses of the strains based on the right stretch tensor

X. Wang and **Z. Zhong** 5901 Three-dimensional solution of smart laminated anisotropic circular cylindrical shells with imperfect bonding

N. Thamwattana and **J. M. Hill** 5923 Analytical solutions for tapering quadratic and cubic rat-holes in highly frictional granular solids

M.-L. Dano and **M. W. Hyer** 5949 SMA-induced snap-through of unsymmetric fiber-reinforced composite laminates

A. D. Jefferson 5973 Craft—a plastic-damage-contact model for concrete. I. Model theory and thermodynamic considerations

A. D. Jefferson 6001 Craft—a plastic-damage-contact model for concrete. II. Model implementation with implicit return-mapping algorithm and consistent tangent matrix

H. Chai 6023 Interfacial mixed-mode fracture of adhesive bonds undergoing large deformation

M. Rovati and **A. Taliercio** 6043 Stationarity of the strain energy density for some classes of anisotropic solids

M. Ishihara and **N. Noda** 6077 Effect of damping on dynamic behavior of a piezo-thermoelastic laminate considering the effects of transverse shear

A. Spagnoli 6095 Koiter circles in the buckling of axially compressed conical shells

Y. Kim and **Y. Y. Kim** 6111 Analysis of thin-walled curved box beam under in-plane flexure

X. Wang, J. S. Lee and **X. Zheng** 6125 Magneto-thermo-elastic instability of ferromagnetic plates in thermal and magnetic fields

R. McMeeking and **A. Ricoeur** 6143 The weight function for cracks in piezoelectrics

B. Nadler and **M. B. Rubin** 6163 Determination of hourglass coefficients in the theory of a Cosserat point for nonlinear elastic beams

R. Mahnken 6189 Creep simulation of asymmetric effects by use of stress mode dependent weighting functions

Reply

M. Ritto-Corrêa and **D. Camotim** 6211 Reply to: Dr. Lip Teh's discussion on "Work-conjugacy between rotation-dependent moments and finite rotations" [Vol. 40, No. 11, pp. 2851–2873]

Errata

Z. P. Bažant and **Z. Guo** 6215 Size effect and asymptotic matching approximations in strain-gradient theories of micro-scale plasticity [International Journal of Solids and Structures 39 (2002) 5633–5657]

NUMBER 23

A. D. Drozdov and **R. K. Gupta** 6217 Constitutive equations in finite viscoplasticity of semicrystalline polymers

V. B. C. Tan, V. P. W. Shim and **T. E. Tay** 6245 Experimental and numerical study of the response of flexible laminates to impact loading

Y. Kim, Y. J. Chao and **X. K. Zhu** 6267 Effect of specimen size and crack depth on 3D crack-front constraint for SENB specimens

B. V. Budaev and **D. B. Bogy** 6285 Probabilistic approach to the Lamé equations of linear elastostatics

J. Wang, T. M. Michelitsch and **H. Gao** 6307 Dynamic fiber inclusions with elliptical and arbitrary cross-sections and related retarded potentials in a quasi-plane piezoelectric medium

Q.-H. Qin 6335 Variational formulations for TFEM of piezoelectricity

D. Williamson, R. E. Skelton and **J. Han** 6347 Equilibrium conditions of a tensegrity structure

V. I. Kushch 6369 Stress concentrations in the particulate composite with transversely isotropic phases

R. Mahajan, F. Erdogan, B. Kilic and **E. Madenci** 6389 Cracking of an orthotropic substrate reinforced by an orthotropic plate

A. P. Velo and **G. A. Gazonas** 6417 Optimal design of a two-layered elastic strip subjected to transient loading

Y. F. Gao 6429 Passing stiffness anisotropy in multilayers and its effects on nanoscale surface self-organization

X.-L. Gao 6445 Elasto-plastic analysis of an internally pressurized thick-walled cylinder using a strain gradient plasticity theory

J. S. Jo, H. J. Jung, M. G. Ko and **I. W. Lee** 6457 Eigenvalue-counting methods for non-proportionally damped systems

J. E. Kim, G.-W. Jang and **Y. Y. Kim** 6473 Adaptive multiscale wavelet-Galerkin analysis for plane elasticity problems and its applications to multiscale topology design optimization

S. Naboulsi and **T. Nicholas** 6497 Limitations of the Coulomb friction assumption in fretting fatigue analysis

C. De Chen and **C. H. Chue** 6513 Singular electro-mechanical fields near the apex of a piezoelectric bonded wedge under antiplane shear

P. Malekzadeh and **G. Karami** 6527 Out-of-plane static analysis of circular arches by DQM

E. Altus and **E. M. Totry** 6547 Buckling of stochastically heterogeneous beams, using a functional perturbation method

NUMBER 24

A. R. Shahani 6567 Mode III stress intensity factors for edge-cracked circular shafts, bonded wedges, bonded half planes and DCB's

N.-A. Noda, M. Kagita, M.-C. Chen and **K. Oda** 6577 Analysis of stress intensity factors of a ring-shaped interface crack

Y. C. Shiah and **Y. J. Lin** 6593 Multiple reciprocity boundary element analysis of two-dimensional anisotropic thermoelasticity involving an internal arbitrary non-uniform volume heat source

S. Kapuria, P. C. Dumir and **A. Ahmed**	6613	An efficient higher order zigzag theory for composite and sandwich beams subjected to thermal loading
X. Y. Wu, K. T. Ramesh and **T. W. Wright**	6633	The coupled effects of plastic strain gradient and thermal softening on the dynamic growth of voids
Q. Wang and **K. M. Liew**	6653	Analysis of wave propagation in piezoelectric coupled cylinder affected by transverse shear and rotary inertia
H. G. Beom	6669	Permeable cracks between two dissimilar piezoelectric materials
W. Ehlers, E. Ramm, S. Diebels and **G. A. D'Addetta**	6681	From particle ensembles to Cosserat continua: homogenization of contact forces towards stresses and couple stresses
S. Givli and **E. Altus**	6703	Effect of strength-modulus correlation on reliability of randomly heterogeneous beams
S. L. Phoenix and **P. K. Porwal**	6723	A new membrane model for the ballistic impact response and V_{50} performance of multi-ply fibrous systems
H. Zheng, M. Li and **Z. He**	6767	Active and passive magnetic constrained damping treatment
J. Zhang, B. Zhang and **J. Fan**	6781	A coupled electromechanical analysis of a piezoelectric layer bonded to an elastic substrate: Part I, development of governing equations
B. Zhang, J. Zhang and **J. Fan**	6799	A coupled electromechanical analysis of a piezoelectric layer bonded to an elastic substrate: Part II, numerical solution and applications
K. Goda	6813	A strength reliability model by Markov process of unidirectional composites with fibers placed in hexagonal arrays
J. C. Sung and **W. G. Chung**	6839	Frictional interface crack in anisotropic bimaterial under combined shear and compression
E. Pan and **P. R. Heyliger**	6859	Exact solutions for magneto-electro-elastic laminates in cylindrical bending
R. Sunyk and **P. Steinmann**	6877	On higher gradients in continuum-atomistic modelling
X. Zheng and **X. Wang**	6897	A magnetoelastic theoretical model for soft ferromagnetic shell in magnetic field
	III	Keywords

NUMBER 25

6913 *Preface*

I. Arias and **J. D. Achenbach** 6917 Thermoelastic generation of ultrasound by line-focused laser irradiation

J. C. Michel and **P. Suquet** 6937 Nonuniform transformation field analysis

V. Tvergaard 6957 Debonding of short fibres among particulates in a metal matrix composite

R. G. Hutchinson, N. Wicks, A. G. Evans, N. A. Fleck and **J. W. Hutchinson** 6969 Kagome plate structures for actuation

J. Wang, A. G. Evans, K. Dharmasena and **H. N. G. Wadley** 6981 On the performance of truss panels with Kagomé cores

S. Hyun, A. M. Karlsson, S. Torquato and **A. G. Evans** 6989 Simulated properties of Kagomé and tetragonal truss core panels

J. A. Crossley, A. H. England and **A. J. M. Spencer** 6999 Bending and flexure of cylindrically monoclinic elastic cylinders

M. Idiart and **P. P. Castañeda** 7015 Field fluctuations and macroscopic properties for nonlinear composites

Y. A. Bahei-El-Din and **A. G. Botrous** 7035 Analysis of progressive fiber debonding in elastic laminates

R. M. Christensen and **S. J. DeTeresa** 7055 Failure plane orientations for transverse loading of a unidirectional fiber composite

R. A. Chaudhuri and **D. Kim** 7063 Localization and shear-crippling (kinkband) instability in a thick imperfect laminated composite ring under hydrostatic pressure

Y. Benveniste and **T. Chen** 7093 The Saint-Venant torsion of a circular bar consisting of a composite cylinder assemblage with cylindrically orthotropic constituents

P. P. Procházka 7109 Deterministic and stochastic optimization of composite cylindrical laminates

T. C. T. Ting 7129 Generalized Cowin–Mehrabadi theorems and a direct proof that the number of linear elastic symmetries is eight

S. Torquato, A. Donev and **F. H. Stillinger** 7143 Breakdown of elasticity theory for jammed hard-particle packings: conical nonlinear constitutive theory

T.-C. Chiu and **F. Erdogan** 7155 Debonding of graded coatings under in-plane compression

S. S. Vel and **R. C. Batra** 7181 Three-dimensional analysis of transient thermal stresses in functionally graded plates

Z. P. Bažant, Y. Zhou, G. Zi and **I. M. Daniel** 7197 Size effect and asymptotic matching analysis of fracture of closed-cell polymeric foam

G. Cocchetti and **G. Maier** 7219 Elastic-plastic and limit-state analyses of frames with softening plastic-hinge models by mathematical programming

NUMBER 26

D. Bruno, F. Greco and **P. Lonetti** 7245 A coupled interface-multilayer approach for mixed mode delamination and contact analysis in laminated composites

H. Ye, C. Basaran and **D. C. Hopkins** 7269 Mechanical degradation of microelectronics solder joints under current stressing

H.-Y. Yeh and **J.-H. Cheng** 7285 NDE of metal damage: ultrasonics with a damage mechanics model

J. C. Boot, I. L. Toropova and **A. A. Javadi** 7299 Predicting the creep lives of thin-walled cylindrical polymeric pipe linings subject to external pressure

C. Basaran, M. Lin and **H. Ye** 7315 A thermodynamic model for electrical current induced damage

X.-L. Gao and **K. Li** 7329 Finite deformation continuum model for single-walled carbon nanotubes

M. Nemat-Alla 7339 Reduction of thermal stresses by developing two-dimensional functionally graded materials

J. Kim, X. Gao and **T. S. Srivatsan** 7357 Modeling of crack growth in ductile solids: a three-dimensional analysis

M. Destrade 7375 Elastic interface acoustic waves in twinned crystals

X. Peng, J. Fan, Y. Yang, Y. Chen and **Y. Yin** 7385 Investigations to the effect of heating-rate on the mechanical properties of aluminum alloy LY12

C. Polizzotto 7399 Gradient elasticity and nonstandard boundary conditions

J.-S. Wu and **L.-K. Chiang** 7425 Out-of-plane responses of a circular curved Timoshenko beam due to a moving load

X. Chen, R. Jiao and **K. S. Kim** 7449 Simulation of ratcheting strain to a high number of cycles under biaxial loading

G. Chen and **G. Baker** 7463 Rayleigh–Ritz analysis for localized buckling of a strut on a softening foundation by Hermite functions

K. Aslantaş 7475 A different approach for calculation of stress intensity factors in continuous fiber reinforced metal matrix composites

N. Stenberg 7483 A model for the through-thickness elastic–plastic behaviour of paper

Z. C. Ou and **X. Wu** 7499 On the crack-tip stress singularity of interfacial cracks in transversely isotropic piezoelectric bimaterials

N. Sukumar and **J.-H. Prévost** 7513 Modeling quasi-static crack growth with the extended finite element method Part I: Computer implementation

R. Huang, N. Sukumar and **J.-H. Prévost** 7539 Modeling quasi-static crack growth with the extended finite element method Part II: Numerical applications

A. S. Sarvestani 7553 On the overall elastic moduli of composites with spherical coated fillers

I Index to Vol. 40, 2003

III Volume Contents

XXX Author Index